

What is claimed is:

1. A printer which draws page data for outputting one page at
2 a time, the page data being edited from line printer output
3 format to a page format based on format information,
4 comprising:

5 one master board and one or more slave boards each
6 executing:

7 pre-editing processing in which a temporary page change
8 position delimiting pages is calculated with the data unedited;

9 editing processing in which data in a next page following
10 the temporary page change position is edited based on the format
11 information to define an actual page change position and the
12 temporary page change position is corrected by the actual page
13 change position to define the page data of the next page; and
14 drawing processing in which the page data is drawn,
15 wherein said master board and slave boards execute the
16 pre-editing processing of the data before the editing
17 processing and the drawing processing.

2. The printer according to claim 1, wherein
1 said master board comprises:

3 a basic unit transferring the data and control
4 information to or from processing units and to or from said
5 slave boards,

6 wherein said processing units, all connected to said
7 basic unit, include:

8 a receiver which receives the data from a host computer;
9 a receiving buffer in which the data is stored;
10 a pre-editing unit which acquires data from said
11 receiving buffer and calculates the temporary page change

12 . position;

13 a second format information storage unit in which format

14 information on a next page following the temporary page change

15 position is stored;

16 a first format information storage unit in which format

17 information common to edited pages is accumulated by obtaining

18 the format information on the edited pages from said second

19 format information storage unit;

20 an editing unit which edits the next page following the

21 temporary page change position defined by said pre-editing unit

22 to define the actual page change position based on the format

23 information stored in said first and second format information

24 storage units, corrects the temporary page change position with

25 the actual page change position, and defines the page data of

26 the next page;

27 a drawing unit which generates drawing data from the page

28 data;

29 a print controller which converts the drawing data into

30 video output data;

31 an output controller which transfers the video output

32 data sent from said print controller and from a print controller

33 of said slave boards to a printer engine to manage a page of

34 the video output data; and

35 a user interface which sends or receives operation

36 information to or from an operator panel operated by a user.

1 3. The printer according to claim 1, wherein

2 each of said slave boards comprises:

3 a basic unit transferring the data and control

4 information to or from processing units and to or from said

5 master board,
6 wherein said processing units, all connected to said
7 basic unit, include:
8 a pre-editing unit which calculates the temporary page
9 change position of data acquired from a receiving buffer;
10 a second format information storage unit in which format
11 information on a next page following the temporary page change
12 position is stored;
13 an editing unit which edits the next page to define the
14 actual page change position based on the format information
15 stored in a first format storage unit in which common format
16 information is stored and in said second format information
17 storage unit, corrects the temporary page change position with
18 the actual page change position, and defines the page data of
19 the next page;
20 a drawing unit which generates drawing data from the page
21 data; and
22 a print controller which converts the drawing data into
23 video output data.

1 4. The printer according to claim 2, wherein
2 said receiving buffer cyclically uses a buffer area in
3 which data from the host computer is stored and an area which
4 is used for the editing processing and, when the buffer becomes
5 full before the page change position is detected during the
6 editing processing, stops receiving the data and synchronizes
7 the format information by distributing the so-far received data
8 among the master board and the slave board to avoid a buffer
9 overflow and to continue processing.

1 5. The printer according to claim 1, wherein
2 said pre-editing unit checks whether or not statements
3 coded in a page printer description language are present and,
4 when statements coded in the page printer description language
5 are found, defines a position defined by page change
6 information as the page change position and, when there is no
7 statement coded in the page printer description language,
8 calculates the temporary page change position from a number
9 of characters and a number of lines, the temporary page change
10 position delimiting pages.

1 6. The printer according to claim 2, wherein the common format
2 information, which is the format information passed across
3 edited paged, includes character pitch information, character
4 size information, left margin information, right margin
5 information, horizontal tab information, vertical tab
6 information, line feeding information, font information,
7 character decoration information, paper size information,
8 print orientation information, number-of-copies information,
9 form information, external character definition information,
10 and page change information.

1 7. A printer comprising:
2 two or more boards, each comprising:
3 a pre-editing unit which performs pre-editing processing
4 in which, in order to delimit received data into pages, format
5 information is extracted from a start of non-delimited data
6 beginning with the start of the received data and a temporary
7 page change position is calculated, said temporary page change
8 position being a trailing end of a page whose leading end is

9. the start of the non-delimited data;

10 an editing unit which performs editing processing in
11 which data following the temporary page change position is
12 edited and an actual page change position is calculated to
13 output editing data of a page, said actual page change position
14 being an actual trailing end of the page whose leading end is
15 the temporary page change position; and

16 a drawing unit which performs drawing processing in which
17 the edited data is drawn and video output data is generated,

18 wherein, when a pre-editing unit of a first board
19 completes first pre-editing processing, a pre-editing unit of
20 a second board where none of pre-editing processing, editing
21 processing, and drawing processing is performed starts
22 pre-editing processing in which, even if the first editing
23 processing calculating an actual page change position of a page
24 whose temporary page change position was calculated by the
25 first pre-editing processing is not yet completed, a temporary
26 page change position of a page beginning with the temporary
27 page change position calculated by the first pre-editing
28 processing is calculated.

1 8. The printer according to claim 7, further comprising format
2 information storage units in which format information and page
3 change position information included in received data and
4 obtained by the pre-editing processing and the editing
5 processing are stored, wherein

6 said pre-editing unit updates, during the pre-editing
7 processing, the information stored in said format information
8 storage units based on the format information extracted from
9 data of a page whose leading end is the start of non-delimited

10 data and on said temporary page change position, and
11 said editing unit updates the information stored in said
12 format information storage units based on the format
13 information obtained by editing the data of the page whose
14 leading end is the temporary page change position and on the
15 actual page change position.

1 9. The printer according to claim 8, wherein, after said editing
2 unit calculated an actual page change position of a page, and
3 when an actual page change position of a preceding page of said
4 page is calculated, said editing unit calculates the actual
5 page executes the process of:

6 (a) calculating an actual trailing end of said page based
7 on the actual page change position of the preceding page,
8 (b) correcting the temporary page change position and the
9 actual page change position calculated of said page based
10 on said actual trailing end,
11 (c) updating the format information stored in said format
12 information storage units based on the actual page change
13 position of the preceding page and the corrected actual
14 page change position, and
15 (d) outputting editing data existing from the actual page
16 change position to the corrected page change position.

1 10. The printer according to claim 8, wherein, when the
2 pre-editing processing is completed, said pre-editing unit
3 does not update the format information stored in the format
4 information storage units but completes the pre-editing
5 processing if the editing processing calculating the actual
6 page change position corresponding to the calculated page

7 change position is completed.